

# New Distribution of National Output

## by Goods, Services, and Construction, 1929-56

**THIS REPORT** presents a new breakdown of the gross national product in terms of the output of major types of product. The total is classified into output of durable goods, nondurable goods, services, and construction, and for the first two of these categories output is shown also as the sum of final sales and inventory change. In the customary gross national product statement the goods-services-construction classification is not carried through to all components, and final sales are adjusted to a measure of output only for the economy as a whole.

The new information is provided in terms of current dollars in table 1 and adjusted for price change, in terms of constant (1947) dollars, in table 2. Table 3 presents implicit deflators, obtained by dividing the constant dollar series into the corresponding current dollar series.

Table 9 presents a further breakdown of the goods portion of gross national product into farm and nonfarm output.

It is believed that the new information on gross national product will be useful for many purposes. It will help in the analysis of problems in which durable output must be distinguished from nondurable. It will facilitate the tracing of the industrial impact of changes in the pattern of final demand. It will permit a more refined analysis of inventory holdings in relation to output. Finally, comparison of the gross national product with other, more restricted, measures of production will be made easier.

### New product classification explained

As in the case of the regularly published series on current-dollar gross national product, the estimates presented in table 1 are in terms of actual market prices. They thus embody all the costs of production, transportation, and distribution which are inherent in moving products to ultimate users or into inventories. It should also be noted that the estimates cover final product only. Raw materials and other intermediate goods and services used up in the process of production are excluded, conforming to the general definition of gross national product.

The manner in which the new classification of gross national product is related to the regularly published one can be explained by reference to table 4, which contains illustrative figures for 1956.

As can be seen, the bulk of durable goods sales in the new classification consists of personal consumption expenditures for durable goods and of producers' durable equipment, both published components of the regular series. To derive the total in this category purchases of durable goods by government (Federal and State and local) and net purchases by foreign countries are added. Finally, an allowance is made for the change in durable goods inventories, to convert total

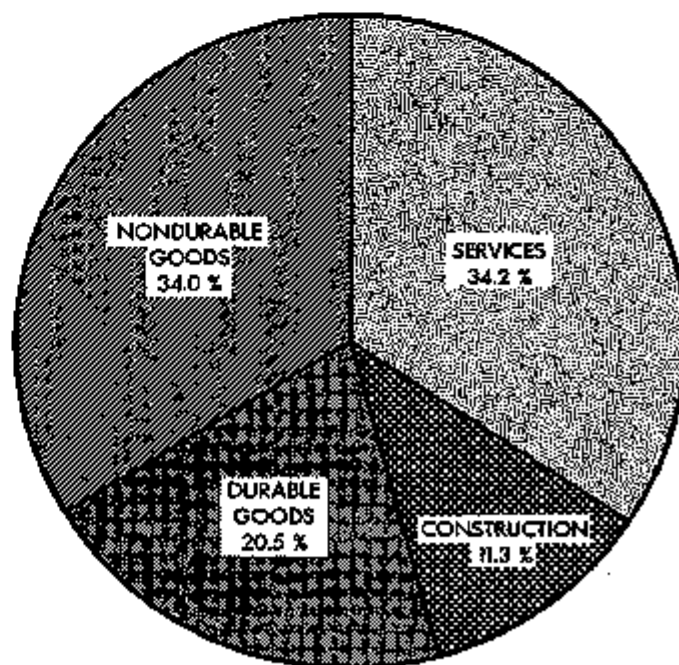
sales of durable goods into a measure of their production. The derivation of nondurables sales and output is similar.

In the case of services, the published component of personal consumption expenditures for services is supplemented by government purchases of services (including services furnished by business as well as the direct services of government employees) and by net service exports. Finally, construction is derived as the sum of the new private construction component of the gross national product and of new public construction, which is a component of government purchases of goods and services in the conventional series. The construction series are on a work put in place basis.

It will be noted that no allocation for inventory change has been made either to the service or the construction component. There is no information for calculating reliable time series measuring them, but it seems certain that the actual amounts would be minor.

It must be clearly understood that the new presentation, necessitating as it does breakdowns of the gross national

Product Composition of GNP—1956



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product that do not have to be calculated for the conventional statement, is somewhat less solidly founded than the latter. The allocation of inventory change among durable and nondurable goods is rough, because in the absence of detailed commodity data it is based on the inventory holdings of firms classified in the durable and nondurable segments of their respective industries. The allocation of net exports (net foreign investment) among goods and services is also far from precise, but the values involved are generally minor. Finally, the type-of-product allocation of government purchases is based in many cases on partial data. Here the amounts involved are large for many of the years covered by the series and errors in the allocations may be considerable. It is hoped that further improvements in the estimating methods underlying this report can be made in the future.<sup>1</sup>

### *Product make-up of GNP*

The product composition of the gross national product has undergone significant changes both in the short and in the long run, but apart from violent fluctuations such as induced by business cycles and military emergencies certain broad stable relations stand out.

These are illustrated in the first chart by reference to the year 1956. In that year, nondurable goods production and services each constituted about one-third of the total gross national product, durable goods output about one-fifth, with the remainder accounted for by construction.

It may be noted that the shares of the major types of output shown in chart 1 differ from those that are obtained when consumer purchases of durable goods, nondurable goods, and services are expressed as percentages of disposable personal income, as in the article on "Pattern of Buying of Consumer

Goods" in the May Survey. For instance, durable goods are much lower as a percent of disposable personal income than are total durable goods—including consumer, business, government, and foreign purchases—as a percent of gross national product. The fact that the present article takes into account all major markets for the various types of output—not just the consumer market—should be kept in mind in comparing the results of the two studies.

The composition of the market for each of the major types of output can be seen from table 4. Consumers predominate in the market for nondurable goods, with government accounting for only a negligible part of the total. It may be noted that in this table foreign transactions are expressed on a net basis (excess of exports over imports) and hence do not give a view of the gross flow of exports and imports of nondurable goods. Total exports and imports in this category were each approximately \$8 billion in 1953.

In contrast, the market for durable goods is much more evenly shared among major purchaser groups. Consumers accounted for approximately two-fifths of the total and business investors in durable equipment for only a little less, with government—Federal, State, and local—taking about one-fifth of durable goods output. As in the case of nondurable goods, foreign transactions are small on a net basis. But the total of \$4 billion in net exports is the difference between exports of \$8 billion and imports of \$4 billion.

Personal consumption has recently accounted for about two-thirds of the total of services and government for one-third. Services include not only purchases from business but also direct purchases of labor services by final users; the large government share, in fact, reflects primarily the compensation paid to military and civilian government employees.

In new construction also private demand took about two-thirds of total output in 1956 and government the remainder.

## *Shifts in Output Composition*

THIS PORTION of the report discusses the major shifts in the product composition of output that have occurred since 1929. Long-term changes are considered first and short-term fluctuations later.

The second chart, which expresses durable goods output and total output in 1947 and 1956 as percentages of 1929, brings out the more than proportionate increase in durable goods output.

### *Postwar expansion of durable goods output*

During the postwar decade durable goods output has averaged over 20 percent of total gross national product, as compared with less than 18 percent in 1929 (see tables 5 and 6). The postwar share of durable goods production appears to be higher also than it was during other years of the late 1920's. The relative gain stands out in the constant dollar figures as well as in the current dollar figures; it constitutes one of the most pronounced shifts in the pattern of postwar output as compared with the last preceding period of sustained prosperity.

All major components of the durable goods market have contributed to this postwar record, with increased government purchases—associated in large part with the military program—evidently most important. The high rate of private investment in producers' durable equipment has been

another factor, and expenditures for consumer durables also have been generally strong.

The requirements of national defense were the major factor responsible for the rapid expansion of government purchases, resulting in a demand not only for strictly military goods, but also for a wide variety of civilian-type producers' durables. In addition to stimulating the output of conventional products, government demand has promoted the development of new products and processes—planes and atomic energy, e. g.—which have been of actual or potential benefit to the civilian market also.

The rise in private demand for producers' durable equipment extended to a wide variety of equipment categories. Expenditures for electrical machinery, agricultural machinery and tractors, instruments, office machinery, construction machinery and trucks have increased as a percentage of the total, while passenger cars, furniture, ships, and railroad equipment have constituted a smaller part of producers' outlays for durable equipment than in 1929.

The high private postwar demand for producers' durable equipment was associated, of course, with the postwar investment boom. In part this boom had its roots in the pent-up demands created by World War II. Population growth and shifts together with many other factors have contributed to the economic expansion. The business atmosphere has featured the competitive drive to hold and enlarge markets and to reduce or limit labor and other costs

1. These methods are described in a technical note which is available on request.

by promoting and exploiting technological progress. The latter has been at an exceptionally high rate in both the war and postwar period.

Consumer durables in strongest demand have included passenger cars, tires, tubes and accessories, household and kitchen appliances, and radio and TV sets. Jewelry and

watches have accounted for about the same share of the consumer durable market as in 1929, while the share of furniture and durable household furnishings has declined.

Factors tending to support the market for consumer durables are the secular increase in per capita real incomes, changes in the distribution of income which have expanded

Table 1.—Gross National Product by Major Type of Product, 1929-56

(Billions of dollars)

Year	Gross national product			Goods									Services	Construction
	Total	Final sales	Inventory change	Total			Durable			Nondurable				
				Output	Final sales	Inventory change	Output	Final sales	Inventory change	Output	Final sales	Inventory change		
1929	104.4	102.8	1.7	50.5	54.8	1.7	18.4	17.0	1.4	28.0	37.7	.3	36.8	11.2
1930	91.1	91.6	-.4	47.3	47.7	-.4	12.2	13.3	-1.0	25.1	34.4	-.6	21.7	9.0
1931	76.3	77.6	-1.3	37.7	39.0	-1.3	8.4	9.6	-1.2	20.3	29.3	-.5	22.0	6.0
1932	58.5	61.0	-2.5	27.0	29.6	-2.6	4.2	5.2	-2.0	22.8	23.4	-.5	27.7	8.7
1933	56.0	57.6	-1.6	27.3	28.9	-1.6	6.5	6.0	-.5	21.8	22.9	-1.1	25.0	2.8
1934	64.0	66.1	-2.1	24.4	26.6	-2.1	6.3	6.1	-.1	26.2	27.4	-1.3	27.2	2.3
1935	72.5	71.6	.9	40.2	39.3	.9	10.2	8.9	1.3	30.0	29.4	-.6	28.4	3.9
1936	82.7	81.6	1.0	46.0	45.0	1.0	13.1	12.2	.9	32.8	32.8	0.0	31.3	5.5
1937	90.8	88.5	2.2	44.6	43.4	1.2	13.0	14.2	-.8	30.6	30.2	1.5	28.6	6.6
1938	84.2	80.2	4.0	45.7	43.7	2.0	10.9	11.6	-.9	35.0	35.0	0.0	23.4	8.1
1939	91.1	90.7	.4	49.8	49.1	.7	12.6	13.3	-.3	24.8	25.8	-.1	34.2	7.4
1940	100.0	98.4	1.6	56.7	54.6	2.2	17.8	16.8	1.0	38.9	37.8	1.0	35.7	8.2
1941	123.8	121.3	2.5	73.5	69.0	4.5	28.1	25.0	3.1	45.4	44.0	1.4	40.6	11.6
1942	159.1	157.3	1.8	94.6	92.7	1.9	36.2	35.1	1.0	58.5	57.5	1.0	50.5	14.1
1943	192.9	189.3	3.6	129.9	131.6	-1.7	54.9	54.8	.1	64.0	64.8	-.8	63.0	9.8
1944	211.4	212.4	-1.0	143.6	134.6	9.0	53.7	69.4	-15.7	79.9	75.8	4.1	72.0	5.8
1945	218.0	214.0	4.0	130.7	131.7	-1.0	50.4	61.6	-11.2	80.3	80.1	.2	70.7	6.2
1946	239.2	235.7	3.5	128.5	122.5	6.0	41.0	35.8	5.2	87.6	86.9	.7	69.0	12.7
1947	253.2	253.9	-.7	145.3	144.3	1.0	49.9	47.2	2.7	95.4	97.1	-1.7	71.6	17.3
1948	297.0	293.0	4.0	156.0	154.4	1.6	49.4	49.4	0.0	106.7	103.0	3.7	78.0	23.7
1949	247.3	250.0	-2.7	149.9	152.6	-2.7	45.2	50.2	-5.0	101.6	102.6	-.1	63.5	23.9
1950	285.1	277.7	7.4	165.6	158.2	7.4	62.0	58.1	3.9	103.3	100.1	3.2	68.8	20.7
1951	328.2	317.9	10.3	192.4	182.0	10.4	74.1	67.0	7.1	118.3	114.4	3.9	103.1	22.6
1952	346.4	342.3	4.1	198.8	195.8	3.0	75.4	74.3	1.1	123.2	121.6	1.6	112.1	24.6
1953	383.2	383.0	.2	209.9	209.7	.2	79.3	78.3	1.0	127.7	128.4	-.7	119.1	27.2
1954	398.7	392.8	5.9	196.9	199.2	-2.3	70.1	78.1	-8.0	126.9	120.1	6.8	123.9	39.8
1955	390.8	380.7	10.1	213.9	209.8	4.1	81.1	79.0	2.2	132.6	130.4	2.2	131.8	45.2
1956	412.4	406.6	5.8	224.0	221.0	3.0	84.5	82.8	1.7	140.1	138.2	1.9	141.3	48.6

Source: U. S. Department of Commerce, Office of Business Economics.

Table 2.—Gross National Product by Major Type of Product in Constant Dollars, 1929-56

(Billions of 1947 dollars)

Year	Gross national product			Goods									Services	Construction
	Total	Final sales	Inventory change	Total			Durable			Nondurable				
				Output	Final sales	Inventory change	Output	Final sales	Inventory change	Output	Final sales	Inventory change		
1929	149.3	147.2	2.1	84.8	82.0	2.8	30.3	24.3	6.0	54.5	58.3	3.8	44.2	20.8
1930	133.2	133.9	-.7	74.7	75.4	-.7	18.1	19.7	-1.7	56.0	55.7	1.0	43.6	16.9
1931	123.0	127.4	-4.4	70.0	71.4	-1.4	13.7	15.8	-2.2	56.3	55.0	1.3	42.4	13.6
1932	107.0	111.7	-4.7	58.5	62.9	-4.4	7.6	11.3	-3.7	51.3	51.6	-.3	29.6	9.2
1933	103.7	107.0	-3.3	57.1	61.4	-4.3	10.0	11.1	-1.1	47.1	50.2	-3.1	40.0	8.6
1934	118.4	117.0	1.4	67.0	67.5	-.5	14.3	14.1	.2	49.7	53.4	-3.7	42.3	7.2
1935	127.8	124.0	3.8	76.4	72.1	4.3	17.8	17.2	.6	57.6	54.8	2.7	44.1	8.4
1936	143.5	141.0	2.5	83.1	82.2	.9	22.6	21.3	1.3	60.8	60.9	-.1	47.7	11.7
1937	162.4	147.7	14.7	92.0	90.0	2.0	24.0	23.7	.3	67.7	63.1	4.6	48.1	12.7
1938	148.9	147.2	1.7	85.2	86.4	-1.2	18.0	18.4	-.4	67.2	67.0	.2	48.8	11.9
1939	147.5	138.6	8.9	92.0	91.7	.3	22.8	22.4	.4	69.3	68.4	.9	50.2	14.7
1940	171.0	167.7	3.3	103.4	99.5	3.9	29.8	27.1	2.7	74.6	72.4	2.2	52.4	14.8
1941	194.3	180.9	13.4	118.4	111.2	7.2	30.3	35.1	-4.8	79.1	76.1	3.0	69.0	20.8
1942	229.0	220.0	9.0	131.0	128.0	3.0	43.8	41.1	2.7	88.5	86.0	2.5	70.6	22.0
1943	269.0	250.1	18.9	151.0	132.9	18.1	61.8	61.8	0.0	99.2	80.4	18.8	88.7	12.3
1944	298.2	280.6	17.6	167.5	168.0	-.5	70.1	71.0	-.9	97.4	97.0	.4	92.7	8.0
1945	263.1	264.7	-1.6	163.6	164.3	-.7	62.8	64.0	-1.2	90.7	90.7	0.0	89.2	8.2
1946	234.6	228.0	6.6	148.3	137.5	10.8	48.6	46.0	2.6	89.8	91.8	-2.0	74.4	15.1
1947	282.2	233.2	49.0	143.3	144.3	-.1	48.3	47.2	1.1	94.9	97.1	-2.2	71.6	17.5
1948	245.9	238.6	7.3	149.8	144.7	5.1	47.0	46.6	.4	102.8	98.2	4.6	78.7	20.4
1949	241.8	244.9	-3.1	143.8	147.2	-3.4	44.7	46.4	-1.7	99.1	100.8	-1.7	78.3	21.4
1950	264.7	267.0	-2.3	168.0	151.5	16.5	56.5	59.4	-2.9	101.8	98.2	3.6	73.8	26.3
1951	287.9	276.1	11.8	168.1	160.4	7.7	62.0	57.8	4.2	105.3	102.0	3.3	87.0	26.0
1952	293.7	291.3	2.4	174.4	172.3	2.1	63.0	63.0	0.0	110.5	109.3	1.2	91.7	27.0
1953	308.3	306.6	1.7	182.7	183.0	-.3	67.0	66.4	.6	115.7	116.0	-.3	93.0	28.7
1954	300.8	302.1	-1.3	174.8	176.1	-1.3	60.4	62.6	-2.2	114.4	113.6	.8	93.8	31.0
1955	322.4	318.7	3.7	199.1	188.4	10.7	68.8	67.2	1.6	120.3	118.2	2.1	98.8	34.0
1956	330.3	327.5	2.8	198.1	190.3	7.8	69.9	67.9	2.0	124.3	122.5	1.8	103.2	38.9

Source: U. S. Department of Commerce, Office of Business Economics.

relatively the middle-income market, and the growth of installment credit to finance durable purchases. Also, on the average, price increases for consumer durables have been less than for nondurables.

### Share of nondurables moderately down

After reaching a peak in the early postwar years, the share of nondurables output in total national output declined, and is currently below the 1929 ratio. This pattern of change is somewhat less pronounced in real than in current dollar terms; the average of nondurable goods prices increased more than the overall average of all gross national product prices from 1929 to 1947, and in the subsequent period it moved up less. (See table 8.)

The decline in the share of nondurables in total output, and the decline in the share of personal consumption of nondurable goods in this total, may both be traced to the increased market role of the government. Despite the fact that personal consumption of nondurables presently constitutes a slightly higher proportion of total consumer spending than in 1929, the faster rise in total government spending than in consumer spending has reduced the share of personal consumption expenditures for nondurables in total national output. Moreover, since purchases of non-

durable goods constitute a much smaller proportion of government than of consumer spending, the increased importance of government purchases has reduced the ratio of total nondurable goods in the gross national product.

Among nondurable consumer commodities, spending trends in the postwar period have been in line with longer term movements. Thus, purchases of gasoline and oil have constituted a growing proportion of nondurable goods spending while expenditures for clothing and shoes have declined relatively, and currently form a smaller proportion of the total than in 1929.

As a proportion of consumer spending for nondurables, expenditures for food have not changed greatly either in the postwar period or as compared with 1929, accounting for about one-half of these expenditures. However, the practice of eating out has grown considerably at the expense of off-premise food purchases.

Within several years after the repeal of the eighteenth amendment, consumer spending for alcoholic beverages rose to approximately one-tenth of consumer nondurable expenditures, and this proportion was maintained in the immediate postwar years. More recently such spending appears to have declined somewhat in relative importance. Tobacco products presently account for over 4 percent of consumer nondurable outlays, approximately the same proportion as in 1929.

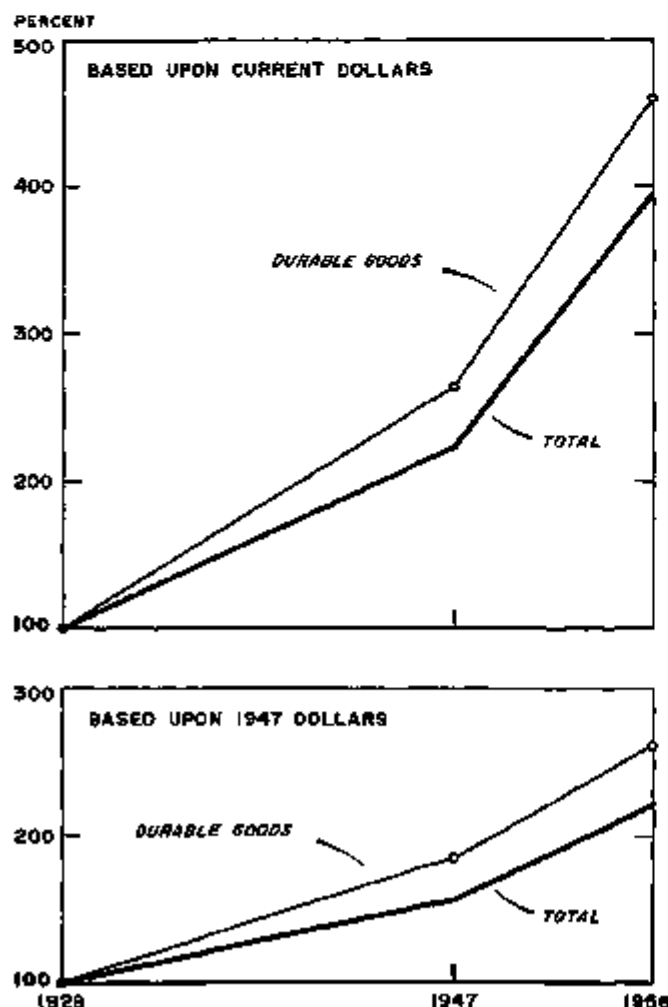
### Farm and nonfarm goods

The new data permit a further breakdown of goods output on the basis of its ultimate origin in farm and nonfarm production. In other words, the value of gross national product taking the form of goods can be divided into gross national product originating in farming, and gross national product originating in all other industries contributing to the final market value of goods production.

To prevent a possible misinterpretation of the data, it should be noted that the farm and nonfarm breakdown of the

### Total Output vs. Durable Goods Output

Years 1947 and 1956 as a percent of 1929  
based upon current and constant dollars



U. S. Department of Commerce, Office of Business Economics

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Table 3.—Implicit Deflators for Gross National Product by Major Type of Product, 1929-56  
(Index numbers, 1947=100)

Year	Gross national product	Goods output			Services	Construction
		Total	Durable	Non-durable		
1929	70.0	66.6	70.2	66.0	81.2	65.1
1930	67.4	63.4	67.6	61.9	79.7	58.5
1931	60.3	59.4	61.3	51.6	73.4	45.7
1932	54.3	45.9	50.1	44.5	70.0	40.7
1933	64.0	47.8	55.2	40.2	64.6	42.8
1934	67.8	53.8	58.0	52.9	66.4	46.4
1935	66.7	63.4	57.6	52.1	64.6	40.3
1936	58.1	65.3	57.6	64.4	66.6	47.2
1937	58.2	55.8	60.2	54.3	67.6	51.4
1938	68.4	52.7	69.8	42.0	68.4	51.0
1939	67.0	53.4	66.8	51.4	68.1	50.0
1940	58.0	64.8	61.9	52.1	68.2	51.7
1941	63.5	63.1	71.4	67.4	68.9	56.0
1942	71.2	72.1	85.1	66.9	71.6	64.1
1943	77.3	85.0	88.7	74.0	72.5	70.8
1944	78.8	78.6	83.6	76.9	77.7	72.4
1945	91.2	80.3	80.1	80.5	83.1	75.6
1946	89.5	88.3	88.3	88.7	82.6	80.7
1947	100.0	100.0	100.0	100.0	100.0	100.0
1948	105.6	104.5	109.3	103.7	103.8	111.6
1949	106.6	104.3	106.0	102.6	105.6	111.2
1950	107.7	104.4	109.1	101.7	112.5	112.2
1951	116.0	114.4	117.8	113.3	113.3	122.0
1952	117.6	113.0	118.2	111.2	122.2	125.6
1953	118.0	113.8	118.2	110.4	120.0	126.3
1954	119.9	112.7	116.6	110.9	120.4	128.2
1955	121.2	113.1	117.9	110.4	123.6	130.4
1956	124.0	116.3	122.6	112.0	124.6	137.3

Note: Implicit deflators for final sales are not given because they differ only insignificantly from the implicit deflators for output.

Source: U. S. Department of Commerce, Office of Business Economics.

total output of goods is not based on a classification of goods as they appear in the final market. For instance, the farm contribution to the value of food is reflected in farm output, whereas value added by other industries to the total (food manufacturing and distribution) is included in nonfarm production. Similarly, the value of automobile output is reflected in farm output to the extent that raw materials of farm origin become embodied in the value of finished automobiles. Only the remainder of the value of automobile output is included in the measure of nonfarm production.

Needless to say, these are only illustrative examples designed to explain the nature of the breakdown. In actual statistical estimation the farm-nonfarm allocation is not and cannot be made for individual products separately; it is obtained by deducting from the measure of gross national product taking the form of goods production, as presented in this article, the gross product originating in farming. The derivation of the latter measure has been set forth in detail in a previous issue of the *Survey*.<sup>2</sup>

The farm-nonfarm breakdown of goods output is shown in table 9. As can be seen from the table and accompanying chart, the output of nonfarm commodities has increased rapidly during the postwar period and is currently about two and a half times its 1929 level in physical terms. Farm output has fluctuated widely in recent years, reflecting changes both in physical volume and in prices. Abstracting from the latter factor, a moderate upward trend is apparent in the postwar period, with the current level of physical output about 40 percent higher than in 1929. In other words, the nonfarm economy has expanded much more rapidly. Currently, nonfarm commodity output accounts for approximately nine-tenths of the total against about eight-tenths in 1929.

### Inventories per unit of output decline

The new breakdown of gross national product permits a somewhat more refined analysis of total inventory holdings in relation to production, by making it possible to relate these holdings to goods production alone.

Table 4.—Derivation of Gross National Product by Major Type of Product, 1956

(Billions of dollars)	
<b>Durable goods</b>	
Sales.....	82.8
Personal consumption expenditures.....	34.9
Producers' durable equipment.....	28.7
Government purchases.....	16.8
Net exports (net foreign investment).....	4.4
Plus: Change in business inventories.....	1.7
Equals: Output.....	84.5
<b>Nondurable goods</b>	
Sales.....	288.2
Personal consumption expenditures.....	122.0
Government purchases.....	3.0
Net exports (net foreign investment).....	.3
Plus: Change in business inventories.....	1.9
Equals: Output.....	146.1
<b>Services</b>	141.2
Personal consumption expenditures.....	89.0
Government purchases.....	46.0
Net exports (net foreign investment).....	-3.8
<b>Construction</b>	48.6
New private construction.....	32.2
New public construction.....	13.4
<b>TOTAL GROSS NATIONAL PRODUCT</b>	412.4

Source: U. S. Department of Commerce, Office of Business Economics.

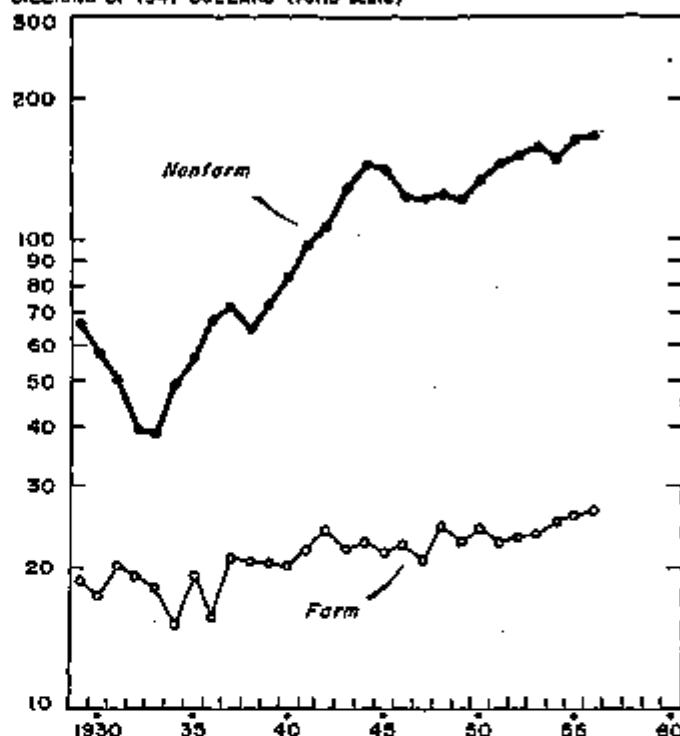
2. See the article by John F. Kendrick and Carl E. Jones, "Gross National Farm Product in Constant Dollars, 1910-50," September 1951.

Data on total inventory holdings are approximate, partly because information on farm inventories is difficult to obtain for the period as a whole. But it is obvious that no conceivable error in the level or trend of the inventory estimates

### Output of Farm and Nonfarm Goods

In constant dollars

BILLIONS OF 1947 DOLLARS (left scale)



U. S. Department of Commerce, Office of Business Economics

57-17-4

could efface the strong downward movement in inventory holdings per unit of output which is exhibited in the following text table, which shows that the ratio of inventories to total goods output has declined from about two-thirds to one-half since 1929.

### Inventory Holdings as a Proportion of Total Goods Output in Current Dollars

1929.....	0.67
1956.....	.50

### Share of services

In terms of current dollars, the share of services in total output has increased in the postwar period, reflecting developments in government and to a lesser extent in personal consumption purchases. In spite of this gain, total services accounted for a somewhat smaller share of output in 1956 than in 1929, a large increase in government purchases not quite offsetting a less than proportionate increase in private demand.

In real terms the pattern of change is somewhat different. The postwar expansion is much less pronounced, with the share of personal consumption approximately stable and the increase in government purchases dampened. On the other hand, services appear somewhat higher in relation to total physical output in 1956 than in 1929, because the decline in

the share of private consumption is greatly mitigated on a real basis, whereas the increase in government purchases continues to stand out. (See tables 5 and 6.)

These differences between the current dollar and real patterns reflect, of course, the differential movement of service prices as compared with the overall price level. In the post-

Table 5.—Percentage Distribution of Gross National Product in Current Dollars, by Major Type of Product and Purchaser, 1929 and 1947-56

	1929	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
Gross national product.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nondurable goods.....	36.4	40.8	41.5	36.5	38.2	36.0	35.7	35.2	35.2	34.0	34.0
Personal consumption expenditures.....	34.1	40.1	38.4	37.7	35.2	33.8	33.0	32.8	33.5	32.3	32.2
Government purchases.....	.5	.7	1.7	2.0	.6	1.4	1.8	2.0	1.7	1.5	1.3
Net exports (net foreign investment).....	-4.1	1.1	.0	.1	-6.6	-4.4	-2.2	-4.4	-3.3	-2.2	-1.1
Change in business inventories.....	.2	-1.0	1.4	-1.3	1.2	1.1	.5	-2.2	.2	.5	.4
Durable goods.....	17.7	20.6	18.4	18.8	21.7	22.0	21.9	21.8	19.4	20.8	20.3
Personal consumption expenditures.....	8.8	8.9	8.6	9.2	10.0	8.3	7.7	8.2	8.1	9.1	8.2
Producers' durable equipment.....	5.0	7.2	7.4	6.0	7.4	7.1	6.7	6.7	6.2	6.1	7.0
Government purchases.....	.7	1.9	1.0	2.3	2.3	4.4	8.3	3.9	3.0	4.1	2.8
Net exports (net foreign investment).....	1.2	2.4	1.2	1.2	.7	.9	.0	.7	.9	.0	1.1
Change in business inventories.....	1.4	.6	.2	-1.8	1.4	2.0	.4	.2	-1.8	.8	.4
Services.....	35.2	30.8	30.8	32.5	31.5	31.4	32.4	32.8	34.4	33.7	34.2
Personal consumption expenditures.....	30.7	22.1	22.0	23.4	22.6	21.4	21.9	22.5	23.9	23.0	24.0
Government purchases.....	4.7	8.3	8.8	10.2	9.1	10.8	14.4	11.3	11.2	10.0	11.1
Net exports (net foreign investment).....	-1.1	.4	.8	-1.1	-1.8	.5	-1.8	-1.9	-1.8	-1.8	-1.8
Construction.....	10.7	7.5	8.3	9.3	10.4	10.0	10.0	10.2	11.0	11.0	11.3
Private construction.....	6.3	6.0	7.0	8.6	8.0	7.1	6.9	7.1	7.7	8.4	8.0
Government construction.....	2.3	1.5	1.2	2.6	2.5	2.9	3.1	3.1	3.4	3.2	3.3

Source: U. S. Department of Commerce, Office of Business Economics.

Table 6.—Percentage Distribution of Gross National Product in Constant (1947) Dollars, by Major Type of Product and Purchaser, 1929 and 1947-56

	1929	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
Gross national product.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nondurable goods.....	36.3	40.8	42.2	41.0	38.5	37.2	37.6	37.9	38.0	37.3	37.7
Personal consumption expenditures.....	38.0	40.1	38.2	39.2	20.7	33.0	34.9	34.5	35.4	34.8	35.2
Government purchases.....	.5	.7	2.0	2.3	.7	1.0	2.1	3.8	2.3	1.8	1.0
Net exports (net foreign investment).....	-4.4	1.1	.1	.2	-1.3	.2	.3	-1.1	.1	.1	.6
Change in business inventories.....	.1	-1.0	1.9	-1.7	1.4	.9	.4	-1.3	.3	.7	.8
Durable goods.....	17.0	20.0	19.3	18.5	21.6	22.2	21.8	21.9	20.1	21.4	20.6
Personal consumption expenditures.....	8.7	8.9	8.7	9.3	10.3	8.6	8.1	8.7	8.9	10.1	9.3
Producers' durable equipment.....	5.7	7.2	7.2	6.6	6.0	6.5	6.2	6.3	5.8	6.0	6.2
Government purchases.....	.7	1.9	1.9	2.1	2.1	4.2	5.0	4.5	4.8	4.0	3.7
Net exports (net foreign investment).....	1.2	2.4	1.2	1.3	.0	1.1	1.2	1.0	1.2	1.2	1.3
Change in business inventories.....	1.2	.6	.2	-1.7	1.3	1.8	.3	.2	-1.7	.5	.3
Services.....	26.6	30.8	30.2	31.6	30.2	31.1	31.2	30.7	31.8	30.0	31.2
Personal consumption expenditures.....	24.9	22.1	21.6	22.9	22.0	21.4	21.5	21.4	22.4	21.9	22.4
Government purchases.....	5.2	8.3	8.8	9.9	8.0	10.3	10.6	10.1	10.1	9.6	9.6
Net exports (net foreign investment).....	.2	.4	.4	-1.2	-1.0	.6	.3	-1.0	.6	.0	.8
Construction.....	12.6	7.5	8.3	8.9	9.9	9.5	9.4	9.4	10.3	10.7	10.3
Private construction.....	10.8	6.0	6.6	8.5	7.5	6.7	6.4	6.3	7.1	7.7	7.3
Government construction.....	2.8	1.5	1.7	2.3	2.4	2.8	2.9	2.9	3.2	3.1	3.0

Source: U. S. Department of Commerce, Office of Business Economics.

Table 7.—Implicit Price Deflators for Gross National Product, by Major Type of Product and Purchaser, 1929 and 1947-56

(Index numbers, 1947=100)

	1929	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
Gross national product.....	75.8	100.0	105.5	100.6	107.7	115.0	117.5	118.0	118.9	121.2	124.9
Nondurable goods.....	65.0	100.0	102.7	102.0	101.7	112.4	111.5	110.4	110.0	110.4	112.0
Personal consumption expenditures.....	64.8	100.0	105.0	102.3	103.8	112.2	113.4	112.9	113.4	112.5	114.2
Government purchases.....	63.0	100.0	101.3	94.1	82.7	154.0	97.9	93.8	92.8	95.4	95.8
Durable goods.....	70.2	100.0	100.3	108.0	100.1	117.8	118.2	118.2	116.0	117.9	122.8
Personal consumption expenditures.....	70.7	100.0	104.3	105.1	105.1	112.0	111.3	111.7	109.1	109.0	110.7
Producers' durable equipment.....	68.5	100.0	108.1	113.3	115.7	125.7	125.4	127.8	128.3	130.3	139.2
Government purchases.....	71.2	100.0	100.2	111.8	114.9	170.8	121.3	121.8	125.4	125.0	129.6
Services.....	83.2	100.0	105.8	109.5	112.5	117.3	122.2	120.0	120.4	123.0	126.8
Personal consumption expenditures.....	83.0	100.0	105.0	108.9	111.4	115.1	120.0	125.0	128.2	120.4	133.3
Government purchases.....	62.7	100.0	105.9	109.6	112.8	118.8	123.8	128.9	132.0	133.8	143.9
Construction.....	55.1	100.0	111.6	111.3	113.2	122.0	125.6	128.3	128.3	130.4	137.3
Private construction.....	55.0	100.0	111.4	110.7	113.0	121.8	125.9	130.1	129.6	132.1	138.1
Government construction.....	59.8	100.0	112.4	112.0	110.0	119.9	129.9	127.0	128.1	130.3	138.2

Source: U. S. Department of Commerce, Office of Business Economics.



war period the increase in service prices was much more pronounced than that in all product prices combined. But in spite of this increase service prices have moved up less over the entire period since 1929 than did prices applicable to gross national product as a whole (see table 8).

In summary, the postwar increase in the share of personal services in gross national product is largely a price phenomenon and, in any event, the share of these services is currently still lower than in 1929. Only government purchases of services (including the services of government employees) have shown a distinct relative increase over this period.

Within the consumer services total many shifts have occurred during the postwar period and as compared with 1929. These were reviewed in detail in an article in a recent issue of the *Survey*<sup>3</sup> and only a brief summary is given here.

Housing and household operations, which together account for about one-half of personal expenditures for services, increased faster than other consumer services during the postwar period and have recently also constituted a larger proportion of the consumer service total than in 1929 (allowing, in the case of housing, for the lower than average increase in rental rates).

Expenditures for personal business—about 15 percent of the consumer total—also have expanded rapidly in the past ten years, but they still claim a smaller share than in 1929 when they were inflated by an extraordinarily high level of brokerage charges.

The evidence with respect to medical services (about 10 percent of the aggregate) is less clear-cut, value and physical measures pointing in somewhat different directions. But it does not appear that large changes have occurred in the proportion of this type of expenditure.

Expenditures for purchased transportation services have declined in relative importance both during the postwar period and as compared with 1929, reflecting a shift to owner-operated transportation. Expenditures in this latter category are classified mainly under goods. The loss in the relative position of recreational spending can be analyzed in somewhat similar terms, with admissions to spectator amusements—mainly motion pictures—losing ground to television purchases.

Religious and welfare spending has decreased in relative importance during the postwar period; in the immediate post-war years such spending was at an extraordinary high rate owing to war-engendered relief activities. The current share of this type of spending is about the same as in 1929. Spending for private education has increased relatively recently and as compared with 1929; spending abroad (both net tourist expenditures and net remittances to abroad) have decreased in relative importance.

### Share of construction

In terms of current dollars the share of construction in total output has increased rapidly during the postwar period, and this was true also separately for the private and public components. Currently the share of construction is somewhat higher than in 1929, reflecting an increase in public outlays.

In real terms the postwar rise is dampened, and total and private construction appear to account for a lower percentage of gross national product than in 1929; construction costs have increased more rapidly than other prices, both during the postwar years and during the period since 1929 as a whole. These conclusions do not hinge on the choice of 1929 as a comparison base. Similar conclusions emerge, indeed with somewhat greater emphasis, if the base is extended to include all the prosperous years of the late twenties.

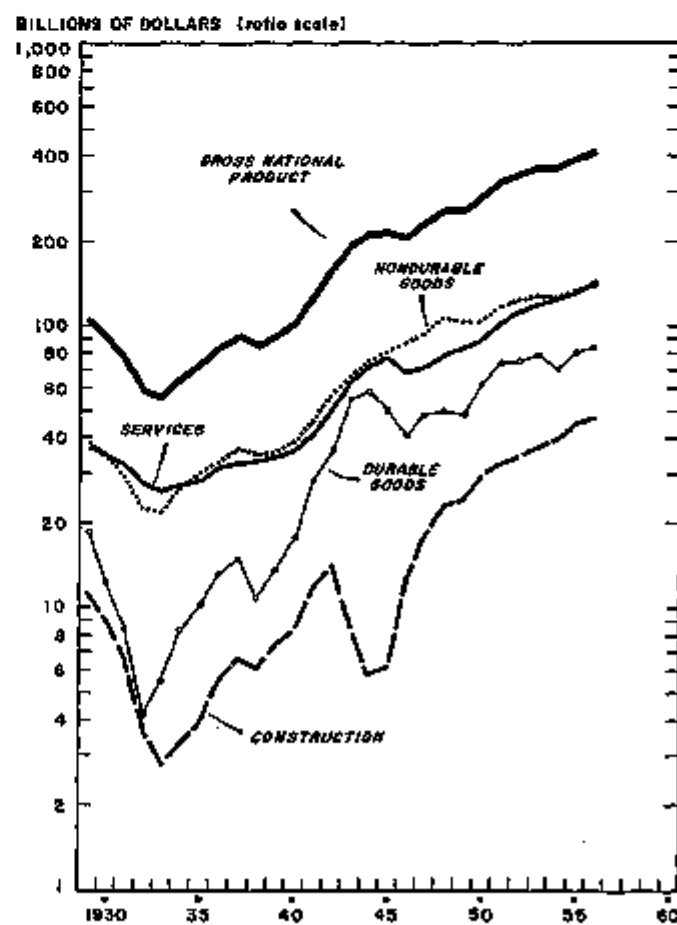
It should be noted that the current dollar construction figures are probably somewhat understated, and the cost indexes used to deflate them are inadequate in their reflection of productivity change. Both operate in the same direction so that the decline in the share of real construction is overstated. But it seems certain that the relatively better showing of durable goods production than of construction, which is suggested by the figures, would persist in the face of all likely modifications in the construction estimates.

Several factors may be adduced as retarding the relative growth of construction. As regards residential construction, regional shifts in population have been towards areas in which, because of climate, local custom, and income factors, housing construction has on the average tended to be a somewhat less important item of expenditure than in areas of earlier population growth.<sup>4</sup> The secular decrease in the average size of the family may also have been a retarding influence. Increasing competition of consumer durables probably has been another. These durables featured rapid improvements in quality and included a wide range of products that were entirely new, and their prices appear to have been rising less rapidly than construction prices.

In the area of nonresidential construction, technological trends have probably stimulated investment in durable equipment as compared with plant. Relative price movements of the two types of assets also have favored investment in the former, although it seems unlikely that price-induced substitutes can have played a very important role.

### Gross National Product

By major types of products



U. S. Department of Commerce, Office of Business Economics

97-17-5

<sup>4</sup> Leo Grobler, David M. Blank, and Louis Winitz, *Capital Formation in Residential Real Estate*, National Bureau of Economic Research, New York, 1930, pp. 108-113.

<sup>3</sup> Carolyn G. Bernhart, "Growth of the Consumer Service Market," May 1936.

### Short-term fluctuations in output

In addition to the long-term changes reviewed so far, gross national product and its components have been subject to large short-term fluctuations. Chart 4 exhibits these fluctuations clearly in terms of the great depression of the thirties; the subsequent recovery, temporarily halted by the decline of 1938; the World War II boom and readjustment; and, finally, the postwar period of high activity, interrupted by the recessions of 1949 and 1954.

The chart also shows that the major product components of gross national product have exhibited very different behaviors. Nondurable goods and services have been relatively stable under the impetus of these short-term fluctuations and, constituting as they do about two-thirds of total production in normal times, have contributed greatly to the stability of aggregate economic activity.

Table 8.—Percentage Changes in Implicit Price Deflators for Gross National Product, by Major Type of Product, Selected Periods, 1929-56

	Percentage change		
	1929 to 1947	1947 to 1956	1929 to 1956
Gross national product, total	43	25	79
Construction	31	37	149
Durable goods	42	26	76
Nondurable goods	54	19	73
Services	30	37	64

Source: U. S. Department of Commerce, Office of Business Economics.

In contrast durable goods output and construction have fluctuated widely. Their large drop in the great depression stands out, as well as their sharp subsequent recovery and their setback in the 1938 decline.

During the war the behavior of the two items was very different. The total output of durable goods increased rapidly as government demand both for military items and for civilian types of producers' goods much more than offset the cuts that were imposed on private consumer and business demand for durables. In contrast, total construction was cut drastically and the resources thus freed diverted to other uses.

In line with these disparate wartime patterns total durable goods output underwent a temporary reduction immediately after the war, whereas construction started to increase rapidly as soon as wartime restrictions were removed. The postwar dips of 1949 and 1954 were reflected in total durable goods output but not in aggregate construction activity.

### Nonfarm commodity and industrial output

The constant dollar measure of nonfarm goods output presented in this article may be compared with the Federal Reserve index of industrial production.

The Federal Reserve index traces the value added by manufacturing and mining to total output, adjusted for price change. The deflated measure of nonfarm goods output traces, in constant dollars, the total value of goods, as defined in gross national product, exclusive of the contribution of farming.

The major definitional differences between the two series are as follows. The nonfarm goods output measure excludes certain items included in manufacturing output which in the gross national product are not classified as goods. The output of construction materials, which in the GNP is

included in the value of construction, belongs in this category.

On the other hand, the measure of nonfarm goods output reflects value added by nonfarm nonmanufacturing industries—e. g., trade and transportation—to the value of goods output. The FRB index does not cover such contributions.

Detailed, precise adjustments to render the two measures comparable cannot be made on the basis of existing statistical information. A rough allowance for the output of construction materials was estimated, but did not significantly affect the relative movement of the two measures. The major differences between the two series are: First, a later cyclical turning point at the depth of the great depression in the GNP than in the FRB measure. Second, a somewhat smaller increase in the GNP than in the FRB measure since 1939, and especially during the postwar period.<sup>5</sup>

This latter result may very well be associated with the fact that the GNP measure takes into account nonmanufacturing contribution to goods output. This contribution (e. g., of the distributive industries) is relatively more important in the case of consumer goods than in the case of goods flowing to business for investment purposes and to the government. Inasmuch as the output of consumer goods has increased less rapidly since 1939 than the output of goods destined for investment purposes or for government use, the GNP measure would have tended to increase less than the FRB index.

Another factor, which contributes to the more rapid increase of the FRB index in the period 1939-47, is the fact that the latter is based on constant values that represent a cross between 1939 and 1947, whereas the GNP measure is on a straight 1947 basis. On a 1947 basis the FRB index would show 3 percent less increase from 1939 to 1947.<sup>6</sup>

Table 9.—Farm and Nonfarm Output of Goods in Current and Constant (1947) Dollars and Implicit Deflators

Year	Billions of dollars			Billions of 1947 dollars			Implicit deflators (1947=100)		
	Total goods output	Non-farm goods output	Farm goods output	Total goods output	Non-farm goods output	Farm goods output	Total goods output	Non-farm goods output	Farm goods output
1929	56.5	41.5	9.8	84.3	68.1	15.7	66.0	70.0	32.5
1930	47.3	39.5	7.7	74.7	57.4	17.3	63.4	60.0	44.7
1931	37.7	31.5	6.2	70.6	55.4	15.2	58.4	62.5	30.0
1932	27.0	22.6	4.4	68.8	50.7	18.2	45.0	56.9	23.2
1933	27.3	22.7	4.6	57.1	50.0	18.1	47.8	58.2	25.3
1934	34.4	30.1	4.3	64.0	50.6	13.0	53.8	61.5	28.9
1935	40.2	33.3	6.9	71.4	56.0	15.3	52.4	59.4	33.9
1936	46.0	37.7	8.3	82.1	67.5	14.6	55.3	58.8	40.2
1937	51.0	43.5	7.5	92.0	71.0	20.9	58.8	60.8	38.6
1938	45.7	39.0	6.7	83.2	64.7	18.5	53.7	60.3	32.8
1939	48.6	43.0	5.6	92.6	72.8	19.8	58.4	59.3	32.0
1940	56.7	46.0	6.8	103.4	83.3	20.1	64.0	69.9	34.0
1941	73.5	64.2	9.3	118.4	96.7	21.7	82.1	86.3	43.3
1942	94.5	81.1	13.4	131.0	107.0	24.0	72.1	75.8	54.5
1943	120.9	105.0	15.9	151.0	136.1	14.9	80.0	81.3	60.9
1944	134.6	118.0	16.7	167.5	144.9	22.6	79.0	81.4	69.2
1945	139.7	114.4	15.3	162.0	141.2	20.8	80.3	81.1	75.6
1946	128.6	109.8	18.8	146.2	122.8	23.4	85.5	86.4	83.3
1947	143.5	122.7	20.8	143.5	122.7	20.8	100.0	100.0	100.0
1948	150.0	132.0	18.0	149.8	125.3	24.5	104.0	106.1	96.8
1949	149.0	129.8	20.1	143.8	121.2	22.6	104.8	107.0	90.3
1950	165.3	144.4	21.1	158.6	134.5	24.1	104.4	107.3	87.8
1951	199.4	167.5	31.9	188.1	145.5	42.6	115.4	116.3	108.8
1952	198.8	170.1	28.7	174.4	151.4	23.0	118.9	118.3	98.3
1953	200.9	180.9	21.0	182.7	158.9	23.8	118.5	117.0	98.2
1954	190.0	170.7	19.3	174.8	150.7	24.1	112.7	118.0	90.7
1955	212.9	191.3	21.7	189.1	168.2	20.9	113.1	119.0	76.0
1956	224.5	201.7	22.8	193.1	166.6	26.5	116.3	122.9	74.8

Source: U. S. Department of Commerce, Office of Business Economics.

5. Differences during the period 1940-46 were not considered inasmuch as the Federal Reserve index for those years is in a process of revision.

6. Census of Manufactures: 1947 Index of Production, U. S. Department of Commerce, Bureau of the Census, and Board of Governors of the Federal Reserve System, Washington, D. C., 1950, p. 4.